

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/GB2005/000725

International filing date (day/month/year)  
25.02.2005

Priority date (day/month/year)  
26.02.2004

International Patent Classification (IPC) or both national classification and IPC  
E21B33/035

Applicant  
DES ENHANCED RECOVERY LIMITED

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material.  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. II Priority**

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1. ☒ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43*bis*.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/GB2005/000725

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**Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or  
industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-49
	No: Claims	50,51
Inventive step (IS)	Yes: Claims	1-49
	No: Claims	50,51
Industrial applicability (IA)	Yes: Claims	1-51
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/GB2005/000725

Although **claims 1, 50 and 51** have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

In addition, the application does not meet the requirements of Article 6 PCT, because **claims 1, 33, 50 and 51** are not clear. Contrary to the description and drawings, the frame as defined as being formed in two parts, the first part of which is adapted to land on the manifold and the second part of which is adapted to make up the connection with the choke body. However, as the overall meaning of the claims is clear when read in conjunction with the description and the drawings, this interpretation of the scope of the subject-matter is considered in the drafting of this opinion.

**V - Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

The document **D1: US-A-4 832 124** is regarded as being the closest prior art to the subject-matter of **claim 1**, and discloses an apparatus (see Figures 2 and 7) for connecting to a subsea wellbore 842) having a manifold and a choke body (43), the apparatus comprising:

- a frame (40) adapted to land on the manifold;
- a conduit system (see Figure 7) having a first end for connection to the choke body and a second end for connection to a processing apparatus; wherein the conduit system comprises a conduit means supported by the frame.

The subject-matter of **claim 1** differs from this known **D1** in that the frame comprises at least one frame member that is adapted to land on the manifold in a first stage of the connection and wherein the conduit means is adapted to be brought into fluid communication with the choke body in a second stage of the connection.

The subject-matter of **claim 1** is therefore new (Article 33(2) PCT).

**WRITTEN OPINION OF THE  
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International application No.

PCT/GB2005/000725

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The problem to be solved by the present invention may be regarded as avoiding damage to the mating surfaces between the conduit and the flowlines whilst the frame supporting both is being landed on the wellhead. The two-stage connection as defined in **claim 1** acts as a buffer to the make-up of the choke and conduit means as a part of the frame is landed before this is carried out.

**D2: US-B-6 321 843** discloses a pre-load connector which can be used in making up subsea choke bodies by means of an insert in the body of the connector which can be seen as protecting at least a part of the choke body. However, none of the documents of the available prior art come close to the solution of landing a frame on a wellhead with the required connectors being able to be placed in two stages in order to protect the choke mechanism as a whole. Therefore the solution proposed in **claim 1** of the present application is considered as involving an inventive step (Article 33(3) PCT).

**Claims 2 to 32** are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

The subject-matter of independent **claim 33** and dependent **claims 34 to 49** relate to a method of connecting a processing apparatus to a subsea wellbore whereby the connection takes place in two distinct stages, where part of the frame is landed on the manifold first followed by a second stage where the choke connection is made up. Therefore, the subject-matter of said claims also meet the requirements of the PCT with respect to novelty and inventive step.

The subject-matter of independent **claims 50 and 51** differs only from that of independent **claim 1** in that instead of a two-part frame, the apparatus comprises only a buffering system or a flexible conduit in order to protect the choke body. As both of these features can be seen from **D1**, such as disclosed by U-looped pipework which would act as a dampener to the body of the choke, said claims, as well as not meeting the requirements of the PCT with respect to conciseness, do not meet the corresponding requirements of the PCT with respect to novelty.